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EXAMINER
LIU, LIN

ART UNIT	PAPER NUMBER
2145	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/796,210	CASSIERS ET AL.
	Examiner	Art Unit
	Lin Liu	2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to communications filed on 03/10/2004.

Claims 1-30 are pending and have been examined.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the enablement requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the

invention. Claim 1 recites the phrase: "said transmitter unit comprising a header

compression unit adapted for converting a primary header of a data packet to be

transmitted into a corresponding secondary header". In view of the present claim

language, it is unclear to the examiner *how can* a converted primary *header* be

transmitted into a corresponding secondary *header*. The specification does not provide

a standard as *to how a converted header can be transmitted into another header*, and

one of ordinary skill in the art would not reasonably appraised the scope of the invention. Applicant is advised to check the present claim language and clearly state what is meant by "said transmitter unit comprising a header compression unit adapted for converting a primary header of a data packet to be transmitted into a corresponding secondary header". All the dependent claims of claim 1 are rejected under the same rationale.

5.   Claim 29 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 29 recites the term "data carrier", wherein this term is not explicitly defined in the specification.

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7.   Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase: "capable of executing" recited in claim 19 is a relative term, which renders the claim indefinite. The term "capable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

Claim Rejections - 35 USC § 101

8.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9.   **Claim 29** is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

With regard to **claim 29,** the instant claim is directed towards a program stored

on a data carrier, capable of executing a method, wherein the data carrier can be any

medium carrying data, which includes the transmission signal and carrier wave, which is

per se nonstatutory.

Claim Rejections - 35 USC § 102

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11.   Claims 1-9, 18, 19, 24-26 and 28-30 are rejected under 35 U.S.C 102 (e) as

being anticipated by **Bornemisza et al. (USPAT: US 7,154,895 B1).**

With respect to **claim 1,** Bornemisza teaches a transmitter unit for transmitting data via a data link (Bornemisza, fig. 2), said transmitter unit comprising a header compression unit adapted for converting a primary header of a data packet to be transmitted into a corresponding secondary header (Bornemisza, fig. 6a, col. 7, lines 29-65 and, col. 10, lines 35-53, noted the original ATM header is compressed into a compressed ATM header), with said primary header being related to said secondary header in one-to-one correspondence (Bornemisza, fig. 5a-5c, and col. 7, lines 29-65); and wherein said transmitter unit is adapted for transmitting a modified data packet via said data link, said modified data packet comprising said corresponding secondary header (Bornemisza, fig. 2, col. 9, lines 55-67, and col. 10, lines 35-61).

With respect to **claim 2,** Bornemisza teaches the transmitter unit of claim 1, wherein said data packet is an ATM cell, and wherein said primary header is an ATM header (Bornemisza, fig. 5a-5c, and col. 10, lines 50-53).

With respect to **claim 3,** Bornemisza teaches the transmitter unit of claim 1, wherein said data link is part of an access network, in particular of an xDSL network (Bornemisza, title, abstract and, col. 10, lines 26-35).

With respect to **claim 4,** Bornemisza teaches the transmitter unit of claim 1, wherein said modified data packet is a fixed packet size (Bornemisza, fig. 5A-5C, and col. 7, lines 29-67).

With respect to **claim 5,** Bornemisza teaches the transmitter unit of claim 1, wherein the size of said secondary header is substantially smaller than the size of said primary header (Bornemisza, fig. 5A-5C, col. 5, lines 43-50, and col. 7, lines 29-60).

With respect to **claim 6,** Bornemisza teaches the transmitter unit of claim 1, wherein said header compression unit is adapted for converting said primary header in real-time (Bornemisza, fig. 6A-6B, and col. 10, lines 26-54).

With respect to **claim 7,** Bornemisza teaches the transmitter unit of claim 1, wherein said header compression unit is adapted for removing redundancy check bits that are part of said primary header (Bornemisza, fig. 6A, and col. 5, line 43 to col. 6, line 30).

With respect to **claim 8,** Bornemisza teaches the transmitter unit of claim 1, wherein said header compression unit is adapted for copying a predefined part of a bit sequence for said primary headers to said corresponding secondary header without any modification (Bornemisza, fig. 5A-5B, col. 7, lines 29-65).

With respect to **claim 9,** Bornemisza teaches he transmitter unit of claim 1, wherein said header compression unit is adapted for assigning, whenever a previously unknown primary header is encountered for the first time, a secondary header to said primary header (Bornemisza, fig. 6A-6B, col. 10, lines 26-53).

With respect to **claim 18,** Bornemisza teaches the transmitter unit of claim 1, wherein said secondary header comprises extra bits that are used for transmitting control information (Bornemisza, col. 9, table 3, and col. 10, lines 19-25).

With respect to **claim 19,** Bornemisza teaches the transmitter unit of claim 1, wherein said secondary header comprises extra bits for accommodating count values required for transmitting said modified data packet in an inverse multiplexing mode (Bornemisza, col. 9, table 3, and col. 10, lines 19-25).

In regard to **claim 24,** the limitations of this claim are substantially the same as those in claim 1. Therefore the same rationale for rejecting claim 1 is used to reject claim 24. By this rationale **claim 24** is rejected.

In regard to **claim 25,** the limitations of this claim are substantially the same as those in claim 7. Therefore the same rationale for rejecting claim 7 is used to reject claim 25. By this rationale **claim 25** is rejected.

In regard to **claim 26,** the limitations of this claim are substantially the same as those in claim 8. Therefore the same rationale for rejecting claim 8 is used to reject claim 26. By this rationale **claim 26** is rejected.

In regard to **claim 28,** the limitations of this claim are substantially the same as those in claim 1. Therefore the same rationale for rejecting claim 1 is used to reject claim 28. By this rationale **claim 28** is rejected.

With respect to **claim 29,** Bornemisza teaches a program stored on a data carrier, capable of executing the method of claim 24 (Bornemisza, fig. 7 and col. 12, lines 7-63).

With respect to **claim 30,** Bornemisza teaches a computer comprising the program of claim 29 (Bornemisza, fig. 7 and col. 12, lines 7-63).

12.   Claims 1, 10-17, 20, 21 and 27 are rejected under 35 U.S.C 102 (e) as being anticipated by **Agarwal (USPAT: US 6,963,570 B1).**

With respect to **claim 1,** Agarwal teaches a transmitter unit for transmitting data via a data link (Agarwal, fig. 2A), said transmitter unit comprising a header compression

unit adapted for converting a primary header of a data packet to be transmitted into a corresponding secondary header (Agarwal, fig. 5A-5B, col. 11, lines 26-60), with said primary header being related to said secondary header in one-to-one correspondence (Agarwal, fig. 5A-5B, col. 11, lines 26-60); and wherein said transmitter unit is adapted for transmitting a modified data packet via said data link, said modified data packet comprising said corresponding secondary header (Agarwal, fig. 2A, 5A-5B, col. 7, lines, 19-64 and col. 11, lines 26-60).

With respect to **claim 10,** Agarwal teaches the transmitter unit of claim 1, wherein said header compression unit comprises at least one lookup table (Agarwal, fig. 6A and fig. 8A), with said lookup table being accessed for converting said primary header, or a part thereof, into said corresponding secondary header, or a part thereof (Agarwal, fig. 6A and fig. 8A, col. 11, lines 42-61).

With respect to **claim 11,** Agarwal teaches the transmitter unit of claim 10, wherein said header compression unit is adapted for creating, whenever said secondary header is assigned to a previously unknown primary header, a corresponding entry in said lookup table (Agarwal, fig. 6A, col. 11, line 42 to col. 12, line 25).

With respect to **claim 12,** Agarwal teaches the transmitter unit of claim 10, wherein an entry of said lookup table comprises header information for relating said primary header, or a part thereof, to said corresponding secondary header, or a part thereof (Agarwal, fig. 6A,8A, col. 11, lines 42-60 and col. 12, line 61 to col. 13 line 2).

With respect to **claim 13,** Agarwal teaches the transmitter unit of claim 10, wherein an entry of said lookup table comprises said primary header, or a part thereof,

whereby said corresponding secondary header, or a part thereof, is represented by the respective entry number (Agarwal, fig. 6A,8A, col. 11, lines 42-60 and col. 12, line 61 to col. 13 line 2).

With respect to **claim 14,** Agarwal teaches the transmitter unit of claim 10, wherein said header compression unit is adapted for searching said lookup table for an entry that matches with said primary header of said data packet to be transmitted, or with a part thereof, and for fetching, in case of a match, said corresponding secondary header, or a part thereof (Agarwal, col. 12, lines 4-25, col. 13, lines 4-19).

With respect to **claim 15,** Agarwal teaches the transmitter unit of claim 1, wherein said transmitter unit is adapted for transmitting update information packets via said data link, with said update information packets comprising update information for updating at least one lookup table on the part of a receiver unit (Agarwal, fig. 10A-10B, col. 14, lines 38-63).

With respect to **claim 16,** Agarwal teaches the transmitter unit of claim 15, wherein each time a new entry in said at least one lookup table is created, an update information packet comprising header information of said entry is transmitted (Agarwal, fig. 10A-10B, col. 14, lines 38-63).

With respect to **claim 17,** Agarwal teaches the transmitter unit of claim 15, wherein said update information comprises one or more secondary headers, or parts thereof, and for each of said secondary headers, a corresponding primary header said secondary header has been assigned to, or parts thereof.

With respect to **claim 20,** Agarwal teaches a receiver unit for receiving data

transmitted via a data link (Agarwal, fig. 7, col. 12, lines 36-52, receiver interface), said

receiver unit comprising a header decompression unit adapted for converting a

secondary header of a modified data packet received via said data link into a

corresponding primary header (Agarwal, fig. 7, lines 36-60), with said secondary header

being related to said primary header in one-to-one correspondence (Agarwal, fig. 4-5,

col. 10, lines 51-64, and col. 11, lines 26-40).

With respect to **claim 21,** Agarwal teaches the receiver unit of claim 20, wherein

said modified data packet is a fixed packet size (Agarwal, fig. 5A-5B, lines 26-40).

In regard to **claim 27,** the limitations of this claim are substantially the same as

those in claim 20. Therefore the same rationale for rejecting claim 20 is used to reject

claim 27. By this rationale **claim 27** is rejected.

Claim Rejections - 35 USC § 103

13.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

14.   Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Agarwal (USPAT: US 6,963,570 B1) in view of **Rosengard (USPAT: US 6,760,345**

B1).

With respect to **claim 22,** Agarwal teaches all the claimed limitations, except that he does not explicitly teach a method of performing a cell delineation by counting the bytes received by said receiver unit.

In the same field of endeavor, Rosengard teaches a method of performing cell delineation by counting the bytes received by said receiver unit (Rosengard, col. 10, lines 5-21, and col. 12, lines 9-40).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of performing cell delineation by counting the bytes received by said receiver unit as taught by Rosengard in Agarwal's invention in order to efficiently reconstruct the compressed header (Rosengard, col. 12, lines 9-24).

In regard to **claim 23,** the limitations of this claim are substantially the same as those in claim 22. Therefore the same rationale for rejecting claim 22 is used to reject claim 23. By this rationale **claim 23** is rejected.

Conclusion

15.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- o   Naden et al. (USPAT: US 6,650,206) discloses a cell based data transmission method.

- o   Strawczynski et al. (PGPUB: US 2004/0037234 A1) discloses a method of header error detection for wireless data cells.

16.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lin Liu whose telephone number is (571) 270-1447.

The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

L. Liu

JASON CARDONE
SUPERVISORY PATENT EXAMINER